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NOTICE OF ALLOWANCE AND FEE(S) DUE

35155 7590 06/22/2009

PERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

EXAMINER

CHEN, QING

ART UNIT

PAPER NUMBER

2191

DATE MAILED: 06/22/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,114	10/19/2003	Matthew A. Huras	YOR920030458US1	2917

TITLE OF INVENTION: SYSTEM AND METHOD FOR REGULATING RATE OF EXECUTION OF SOFTWARE EXECUTION UNITS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	09/22/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

35155 7590 06/22/2009
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409 BROAD STREET
PITTSBURGH, PA 15143

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/689,114 10/19/2003

Matthew A. Huras

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TITLE OF INVENTION: SYSTEM AND METHOD FOR REGULATING RATE OF EXECUTION OF SOFTWARE EXECUTION UNITS

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	09/22/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHEN, QING	2191	717-124000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
 Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,114	10/19/2003	Matthew A. Huras	YOR920030458US1 (590.118)	2917
35155	7590	06/22/2009	EXAMINER	
FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			CHEN, QING	
			ART UNIT	PAPER NUMBER

2191

DATE MAILED: 06/22/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 930 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 930 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/689,114

Applicant(s)

HURAS ET AL.

Examiner

Qing Chen

Art Unit

2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on March 23, 2009.
2. ☒ The allowed claim(s) is/are 1-3,6-9,11-14,17-20 and 22-24, renumbered as 1-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. This Office action is in response to the amendment filed on March 23, 2009.
2. **Claims 1-3, 6-9, 11-14, 17-20, and 22-24** are pending.
3. **Claims 1, 2, 11-13, 22, and 23** have been amended.
4. **Claims 4, 5, 10, 15, 16, 21, and 25** have been canceled.
5. **Claims 1-3, 6-9, 11-14, 17-20, and 22-24** are allowed, renumbered as 1-18.
6. The objection to the specification is withdrawn in view of Applicant's amendments to the specification.
7. The objections to Claims 1-3, 5-9, 11-14, 16-20, 22, and 23 are withdrawn in view of Applicant's amendments to the claims or Examiner's amendments to the claims.
8. The 35 U.S.C. § 112, second paragraph, rejections of Claims 1-3, 5-9, 11-14, 16-20, 22, and 23 are withdrawn in view of Applicant's amendments to the claims.

Examiner's Amendment

9. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with Stanley D. Ference III (Reg. No. 33,879) and Andrew Gabriel (Reg. No. 61,427) on June 17, 2009.

The application has been amended as follows:

AMENDMENTS TO THE SPECIFICATION

The amendment document filed on March 23, 2009 is considered non-compliant because it fails to meet the requirements of 37 CFR 1.121—namely, an instruction which identifies the location of an amended paragraph of the specification is incorrect. In order for the amendment document to be compliant, please amend the incorrect instruction as follows:

On page 8 of the amendment document entitled “Amendments to the Specification,” please replace the instruction “[p]lease replace the paragraph of the specification beginning on page 16, line 4 and ending on page 16, line 4 with the following:” with the instruction “[p]lease replace the paragraph of the specification beginning on page 16, line 4 and ending on page 16, line 16 with the following:.”

AMENDMENTS TO THE CLAIMS

Please cancel Claims 5, 16, and 25 and amend Claims 1, 2, 12, 13, and 23 as follows:

1. (Currently Amended) A system comprised of a computer processor configured for executing a computer program stored in computer memory so as to regulate resource consumption in a computer system used for utility work and production work, the system further comprising:

a manager module arrangement for determining and registering at least one utility within the computer system, wherein said registering informs the manager module arrangement of the existence of the at least one utility;

an arrangement for deriving a throttling level for the at least one utility which quantifies the reduction in the rate at which the at least one utility consumes resources; and

an arrangement for inserting the derived throttling level at a selected point during execution of the at least one utility, wherein the derived throttling level is updated dynamically through iterations of a work loop until said at least one utility has completed its work and then deregisters with the manager module arrangement;

wherein said arrangement for inserting the derived throttling level is implemented within the at least one utility, said at least one utility being configured to dynamically self-throttle and not require an operating system to throttle the at least one utility;

wherein the derived throttling level is enforced through a self-imposed sleep; and
wherein the derived throttling level comprises a sleep fraction, the sleep fraction
comprising:

sleep time divided by action interval;

wherein the action interval is a constant multiple of the work loop of the at least
one utility;

wherein the sleep fraction is a value between 0 and 1;

wherein if the sleep fraction is 0, the at least one utility is unthrottled; and
wherein if the sleep fraction is 1, the at least one utility is fully throttled.

2. (Currently Amended) The system according to Claim 1, wherein said manager module arrangement for determining ascertains whether the at least one utility has indicated its presence within the computer system.

5. (Canceled)

12. (Currently Amended) A method for regulating resource consumption in a computer system used for utility work and production work, the method comprising the steps of:

determining and registering at least one utility within the computer system, wherein said registering informs a manager module of the existence of the at least one utility;

deriving a throttling level for the at least one utility which quantifies the reduction in the rate at which the at least one utility is processed or otherwise consumes resources; and

inserting the derived throttling level at a selected point during execution of the at least one utility, wherein the derived throttling level is updated dynamically through iterations of a work loop until said at least one utility has completed its work and then deregisters with the manager module;

wherein the derived throttling level is implemented within the at least one utility, said at least one utility being configured to dynamically self-throttle and not require an operating system to throttle the at least one utility;

wherein the derived throttling level is enforced through a self-imposed sleep; and
wherein the derived throttling level comprises a sleep fraction, the sleep fraction
comprising:

sleep time divided by action interval;

wherein the action interval is a constant multiple of the work loop of the at least one utility;

wherein the sleep fraction is a value between 0 and 1;

wherein if the sleep fraction is 0, the at least one utility is unthrottled; and

wherein if the sleep fraction is 1, the at least one utility is fully throttled.

13. (Currently Amended) The method according to Claim 12, wherein said determining step comprises ascertaining whether the at least one utility has indicated its presence within the computer system.

16. (Canceled)

23. (Currently Amended) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform a method for regulating resource consumption in a computer system used for utility work and production work, the method comprising the steps of:

determining and registering at least one utility within the computer system, wherein said registering informs a manager module of the existence of the at least one utility;

deriving a throttling level for the at least one utility which quantifies the reduction in the rate at which the at least one utility is processed or otherwise consumes resources; and

inserting the derived throttling level at a selected point during execution of the at least one utility, wherein the derived throttling level is updated dynamically through iterations of a work loop until said at least one utility has completed its work and then deregisters with the manager module;

wherein the derived throttling level is implemented within the at least one utility, said at least one utility being configured to dynamically self-throttle and not require an operating system to throttle the at least one utility;

wherein the derived throttling level is enforced through a self-imposed sleep; and
wherein the derived throttling level comprises a sleep fraction, the sleep fraction
comprising:

sleep time divided by action interval;

wherein the action interval is a constant multiple of the work loop of the at least
one utility;

wherein the sleep fraction is a value between 0 and 1;

wherein if the sleep fraction is 0, the at least one utility is unthrottled; and

wherein if the sleep fraction is 1, the at least one utility is fully throttled.

25. (Canceled)

-- END OF AMENDMENT --

Reasons for Allowance

10. The following is an Examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, "wherein the derived throttling level is enforced through a self-imposed sleep; and wherein the derived throttling level comprises a sleep fraction, the sleep fraction comprising: sleep time divided by action interval; wherein the action interval is a constant multiple of the work loop of the at least one utility; wherein the sleep fraction is a value between 0 and 1; wherein if the sleep fraction is 0, the at least one utility is unthrottled; and wherein if the sleep fraction is 1, the at least one utility is fully throttled" as recited in independent Claims 1, 12, and 23.

The closest cited prior art, the combination of US 2003/0088605 (hereinafter "Beghtel") and US 6,834,386 (hereinafter "Douceur"), teaches a method, computer program product, and system for self-throttling the use of computer resources by a computer task executing on a computer system in order to avoid the monopolization of critical computer resources for extended periods of time. However, the combination of Beghtel and Douceur fails to teach "wherein the derived throttling level is enforced through a self-imposed sleep; and wherein the derived throttling level comprises a sleep fraction, the sleep fraction comprising: sleep time divided by action interval; wherein the action interval is a constant multiple of the work loop of the at least one utility; wherein the sleep fraction is a value between 0 and 1; wherein if the sleep fraction is 0, the at least one utility is unthrottled; and wherein if the sleep fraction is 1, the at least one utility is fully throttled" as recited in independent Claims 1, 12, and 23.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/689,114

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/Q. C./

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191